boat, sucking cigarettes or sipping bitter Arab coffee, but when the water is warmer a longer period is spent in the sea. Food is not eaten during the diving hours as it is considered bad for the diver's health. 228

The splash and swirl of the blue waters of the Gulf, often as smooth and clear as glass, the glistening bodies of the sun-burnt divers, the deep-throated chanting of the Saibs and the mounting piles of dark encrusted shells, are sights and sounds never to be forgotten. From time to time the cabin boy, who is found on each boat, collects the shells in sacks and piles them along the sides of the boat. As the sun sets the crew eat their light meal of dates, fish, bread and coffee and then sink down with pleasure into deep sleep along the decks. Then all that there is to disturb the silence of the night is the crackling of the fire burning on the portable mud hearth, the creaking of ropes and the splash caused by the line of the midnight fishermen catching to-morrow's meal.

Next morning the members of the crew are up early and gather around the heaps of shells which are more easily opened after having been left in the night-air, and with deft flicks of little curved knives they examine the oyster's meat so that not even the smallest seed pearl is missed. The despoiled shells are tossed aside, to be collected later and thrown back into the sea. As the pearls are found, their finders stick them between their toes until they have collected a number, which are then handed to the nakhuda or captain. The latter stores them in a great wooden chest, studded with brass nails after tying them in small squares of red cloth, that being the colour which is believed to show pearls to their best advantage. When all the shells have been opened the remains are thrown overboard, the decks swabbed down and the day's diving commences.

From time to time boats return to Bahrain to collect fresh provisions and for the medical treatment of the crew. Fresh water, surprisingly enough, is less of a problem, for near many of the pearl banks there are submarine fresh water springs, some of which have been controlled by pipes affixed by the Bahrain Government. The monotony of the diver's day is also broken by the visits of "Tawawish," pearl buyers, who come out in launches to the banks to offer ready cash for their purchases, and by visits of hospital and police launches from Bahrain. The end of the diving season, as well as the date of its commencement, is laid down by the annual proclamation of the Bahrain Government. [312] [437] [656]

Despite the tales of travellers, sharks and saw-fish are not a very great menace to divers, they are in fact a rarity and for many years no diver has been attacked by either fish. The blue jelly-fish is more feared than either, for with its long tentacles it can give a most unpleasant sting, and it is to combat it that in the jelly-fish season many divers wear a form of cotton combinations covering all parts of the body except hands and eyes. The detrimental effect of diving on the men's health is often exaggerated, and with the better diet and medical treatment the divers of today are a healthy set of men and compare favourably with workers in other industries. [136]

Some twenty years ago a Danish scientific expedition paid two visits to the Persian Gulf to report on the fish found in it. They discovered that there were over 400 species. 114 136

AGRICULTURE

Parts of Bahrain have always been fertile and very probably in ancient times more land was under cultivation than is being used today. The gardens of Bahrain are mentioned by many ancient visitors to the islands. The captains of Alexander's ships described Tylos, the ancient name of Bahrain, as "well-wooded and productive" while Idrisi, writing in the 12th century, says that the "capital of Awal (Bahrain Island) is Bahrain; this is a town well populated whose environs are fertile and produce corn and dates in abundance." It could be that the capital of Bahrain mentioned by Idrisi was Bilad al-Qadim, the description would seem to imply this. 311 361

Formerly the Bahrain gardens were irrigated from natural springs and surface wells, the water either flowing from the springs into the gardens or being lifted from wells to the level of the land by various forms of water scoops. The most commonly used is the Shaduf. A man stands near the edge of the well and draws up the water in a sheep skin bag attached by ropes to a counter-balanced pole. In larger wells donkeys or oxen are used, walking endlessly up and down a ramp pulling the water to the surface from where it runs down into irrigation channels. As the rainfall in Bahrain is almost negligible all agriculture depends upon irrigation. 312

In the 20's and 30's Major Frank Holmes drilled many artesian wells in Bahrain which completely changed Bahrain's system of irrigation. By introducing these wells into the island Major Holmes did much to increase the area of land which could be cultivated, but artesian wells turned out to be a mixed blessing, for in the following years so many wells were drilled that the water head went down and some of the gardens in the south of Bahrain dried up. Today this problem is being met by a government Water Committee which decides whether and under what conditions new wells may be drilled, it tries to ensure that the water resources of the islands are maintained at their present level or even increased by the utilisation of the many large springs of fresh water which lie under the sea around the shores of Bahrain. 312 647 653

The two commonest crops in Bahrain are dates and lucerne (alfalfa). the latter is often grown in the shade of the date palms where its vivid greenness provides a contrast to the brown and grey-green of the date palms. There is little good fruit in Bahrain although a certain number of fruit trees are cultivated, these include citrus, tamarind, pomegranate, fig, guava, terminalia (indian almond) mango, bananas, grapes and kanard (a small apple-like fruit). European vegetables are grown in the cold weather and other ground crops include sweet potatoes, melons, tomatoes, ladies fingers, egg plants, onions, garlic and pumpkins. 241

172 high walls around a central courtyard are all that it consists of, and some
712 of the Omani guns still remain in the towers. The fort was built in 1800 by the Ruler of Muscat, Sultan bin Ahmed, who in that year seized Bahrain from the Khalifah and sent his brother, Sayed Said, to govern the Islands they were soon expelled but later returned. The Muscatis remained in their fort for nine years, but after their expulsion in 1809 by the Khalifah-Saudi alliance the fort was left deserted.

Near Muharraq town is the fort of Abu Mahur, already mentioned in connection with the Portuguese map and named after one of the largest undersea springs in Bahrain, which is situated near it. The fort, which dominates the southern approach to Muharraq and Manama, was built on the island-peninsular of Abu Mahur by Shaikh Abdulla al-Khalifah, who ruled jointly with his brother Sulman, builder of the fort at Rifaa ash-Sharqi. In 1843 Shaikh Abdulla was expelled from Bahrain by his son Muhammad, who was also unable to enjoy a peaceful reign, for after a dispute with Qatar Muhammad was replaced as Ruler of Bahrain by his brother Ali and the British shelled the fort
[744] of Abu Mahur, which was destroyed with the exception of one tower. More recently the remains of the fort and the island was given to the Baluchi retainers of the Khalifah, but in 1930 the Baluchis were given land elsewhere and the island was turned into a Quarantine Station. This is therefore a fort which visitors are not advised to visit.

THE QANATS

● 312 "Qanat" is the Arabic name for the underground water channels
172 which are found in many parts of Bahrain, particularly in the south-west of the island. Here, among others, is a long channel running inland from Sadad, another brings water to Karzakan from the spring called Ijraiyi, a mile and a half to the north, and a third channel runs from the spring of Malakiya to the village of the same name. These are but a few of the many channels in Bahrain.

312 These channels are present in great numbers in Persia and are also
171 found in eastern Saudi-Arabia and Syria. It is probable that those in Bahrain were first built by the Persians. It is stated in at least one history that they were the work of the Persian King Anushirvan who captured Bahrain from the Arabs in the fourth century A.D. They have often been mentioned by travellers to Bahrain and in a local history it is stated that during a war that took place in the eighth century between the people of Bahrain and an army sent by the Caliph, the Bahrainis made good use of these same channels by passing through them till they reached the rear of the enemy forces and then making a successful surprise attack.

312 The channels were built to prevent the wastage of water from evapor-
172 ation which would have occurred had the water been carried in surface channels, By this method the water is sheltered from the sun and its flow is not hindered by falls of sand or the movements of sand dunes. It seems that the channels were first built as open ditches and then roofed with slabs of sea rock, called feroush. The roofs of the channels are sloping and after construction they were covered with sand to the

level of the ground. Every 10-20 yards along the length of the channels are airholes, round chimneys lined with stone and varying in diameter from 2 to 5 feet. The top of the shaft, which resembles a well head, is surrounded by a low wall. Page 116 shows the channel which has been uncovered and in which the construction of the airholes can clearly be seen. At the shaft of the water channel which runs west of the village of Shakhura there is a large subterranean room which serves the purpose of a bathing hall. It has a high arched roof with columns branching out from a central pillar. It is roofed over and has a hard gypsum floor covered with fine white sand. There is a continual stream of cold water through the chamber, which is still used by the inhabitants from the surrounding villages as a bathing place to which they go in the heat of the summer and sit in comfort in the shady coolness below. It is rumoured that there are more such chambers, but this is the only one that the author has personally visited.

The channels in most cases carry water from springs in the hills a few miles inland to the coastal gardens. Many of them are still used, although others have long since fallen into ruin, but very skilful work was involved in their building and the fact that water still flows in many of them is a conclusive proof of their scientific construction. So far, no inscriptions have been found within them, but there is no doubt that if they were examined with care some signs would be found of their exact origin.

In these four sections most of the antiquities of the Bahrain Islands have been described, for they are unfortunately rare and, with the exception of the Tumuli, the mosques, the forts and the Qanats there, is little of archaeological interest in Bahrain. There are possibilities of future discoveries, however, especially in Bilad al-Qadim which should, as the ancient capital, yield something of interest to any archaeologist who explores its ruins. The numerous Arabic inscriptions would also be worth further study and their translation should add something to the history of Bahrain by giving the names of the various rulers who, at one time or another, built mosques or other buildings and had their good deed inscribed on stone.

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In addition to these works a number of books appear in the general bibliography at the end of this guide which may be consulted for further information about Bahrain's antiquities.

and coffee-shops. This activity continues until about eleven o'clock especially in the summer when it is pleasanter to be out in the open air than indoors.

Manama is supplied with electric light from the Government Power House, situated on the point at the north-east end of Manama. The town water supply, also a Government concern, comes from artesian wells in what used to be the Municipal Garden from where it is pumped into large tanks high above Manama and from there distributed by mains to all parts of the town and to numerous drinking fountains and public baths. This water system, which was installed by Holloway Bros., was completed in 1949, before this the water came from private and public artesian wells and was distributed by water carriers.

QASARI

It is logical in describing Bahrain to leave Manama by the main road, Awal Road, but a more interesting drive can be taken by following the 2nd class road which branches off from Awal Road beyond the Mental Hospital. After passing through a number of villages of comparatively little interest the road comes to a shaded lane bordered on one side by a lake. This is Ain al-Qasari, whose pool, although more extensive than that at Adari, is shallow and therefore unsuitable for swimming. Here there is a garden and a pleasant little house overlooking the pool, admittance to which is free, which is much frequented by picnicers. In the pool there are fish, some of which are as much as eighteen inches in length, as well as turtles. These are so accustomed to visitors that when people walk along the edge of the water or sit in the house, they swim lazily to the surface, waiting to be thrown pieces of bread or food. In a country consisting mostly of desert, and where a small and dirty pool usually constitutes the local water supply, the attractive appearance of Ain al-Qasari, particularly at sunset, is very agreeable.

There are in fact two springs called Qasari, the second, situated on Awal Road, is better known by the name of the "Dhobis Pool" on account of the large numbers of Indian washermen who mercilessly beat the dirty clothes on slabs of rock, and when they have finished hang them out to dry in long lines by the side of the road. It is a not unusual sight to round a corner of the road and to see before one lines of clothes, billowing in the breeze like wind-socks, and the frantic activity of the dhobis standing in the water in an odd array of clothing attempting to finish their task and dry the laundry before the sun sets.

BILAD AL-QADIM

A short way beyond Ain al-Qasari is Bilad al-Qadim, literally "The Old Town," formerly the capital of Bahrain, which lies between the Suq al-Khamis Mosque, whose twin minarets are a landmark for navigators, and the Khor Mukhtar inlet on the east coast. Bilad al-Qadim can also be approached from Awal Road opposite the Suq

al-Khamis Mosque and half a mile south of the village there is an inlet of the sea which can be crossed at low tide by a ford which leads to the village of Tubli. 361

Bilad al-Qadim is a Shiite village and was the capital of Bahrain before the Arab conquest of the Islands. It is frequently referred to in local Shiite histories and is described but not named in a number of early Moslem writings. A large area of the town is now in ruins, but its walls and mounds show that it was once a place of considerable size and importance. According to local reports the sandy mound near the School opposite Suq al-Khamis Mosque is all that remains of the fort that protected the town, while the mosque itself was its Friday Mosque. The Thursday Market (Suq al-Khamis), after which the district takes its name, is probably a relic of the time when this was the capital of Bahrain and when goods were brought here from the country for sale, just as today the Wednesday Market serves the same purpose in Manama.

There are several well-known springs in the vicinity including Qasari, which has already been mentioned, the Dhobi Pool and Abu Zaidan. A relic of the old town still stands in the shape of Masjid ar-Rafia, a mosque built over a spring, which is on the west side of the town and contains an ancient Kufic inscription. Date groves and gardens surround the town but many of the inhabitants work in Manama, where some of them own shops. The white buildings in the clearing opposite the Suq al-Khamis Mosque are a Government Boys School and a dispensary. [312]

ADARI

"The Lido of Bahrain" is a description which is often used for Ain Adari (The Virgin's Pool). It is especially applicable in the summer when every evening buses, cars, lorries and bicycles convey people from Manama to the deep, cool blue waters of the pool where they swim or sit about in the public garden or coffee-shop. Adari is the largest natural spring in Bahrain and the stream which flows from it irrigates many acres of gardens. 312 529

Adari was once a very messy pool where camels and donkeys were watered, but it has been developed by the government into a bathing place. The sides of the pool have been lined with cement and provided with steps, there is a mosque, a coffee shop, bathing huts and diving boards, and around the pool a flower garden where oleandar, bougainvillea and ponciana flourish. The road to Adari, which branches off Awal Road, is indicated by a sign-post about half a mile south of Suq al-Khamis. [491]

UPPER AND LOWER SEHLAH

These are two villages on opposite sides of Awal Road. Upper Sehlah is a small village of stone and barasti houses built on a hill overlooking the surrounding gardens; in summer the village expands when the date pickers descend on it and put up their barastis. 361 245 221

to the days when the Rulers of Bahrain lived here and ruled the Islands from the castle. Below the fortresss is the spring of Hanani, whose water is the best in Bahrain, and a plain where, in the rainy season, a small lake forms and on disappearing leaves in its place a bright lawn of grass. Rifaa has been expanding rapidly during recent years, the town is spreading to the south-east, and it now possesses boys' and girls' schools and a Municipality. Some members of the Ruling Family still live in the town which has expanded owing to the development of the oil industry, in which some 500 of its male inhabitants are working.

The situation of the town is ideal for strategical purposes, from it it is possible to see Manama, Muharraq and Sitra while the land around it is free of vegetation which could have served to hide the enemy. It has an excellent climate and is drier than Manama in the summer. To the north of the town are two small graves where members of the Khalifah family are buried; these fell in battle during a civil war which took place in the 19th century.

There is a tradition connected with the fortress of Rifaa. It is said to have been built in the 17th century by the Wazir of the then Ruler, a certain Shaikh Jabbara. For years the Ruler and his wazir worked together, but one day the Shaikh was told about the beauty of the wazir's wife, and he desired her. He was tricked into believing that he had visited her, though in fact he was entertained by her maid-servant. He was so angry at the deception, about which the wazir knew nothing, that he killed him. The Wazir's widow thereupon fled from Rifaa to the mainland, from where she wrote to the Shah of Persia sending him a minature palm tree of pearls and gold and saying that so rich was Bahrain that such a tree was given to a child as a toy. She succeeded in exciting the avarice of the Persian Shah, who sent an army to Bahrain, defeated and killed Shaikh Jabbara, and annexed the Islands to Persia, thus avenging the Wazir's wife. This same Shaikh Jabbara is said to have lived in the fort of Amr, south-east of the Jebel, which is mentioned in Chapter VIII.

There is a third Rifaa, a small community built by BAPCO for its Indian and Pakstani employees; this is mentioned in the Chapter on Bahrain's Oil.

AWALI

Meaning "The High Places," this name was given by Shaikh Hamed, the late Ruler of Bahrain, to the oil camp when it was first established in its present location. Before the oil company arrived in Bahrain the site was deserted—for who would live in the middle of a waterless desert? But the company wanted to build their town near the oil field, and so the small, 240 foot, hill was chosen. Today Awali somewhat resembles a London surburb or a small American town. As in London, varied gardens and different coloured exteriors of the houses serve to disguise their basic similarity. In these gardens children play while their mothers chat to each other over the fences. Happy

by Sunni Arabs who were prosperous when the pearling industry flourished but who depend today upon fishing, the oil company and transporting jus from Hawar for their living. In the summer the heat and the shortage of water (for although Jaw has a well it is brackish and more to the taste of the date palms that grow around it than to the people) drive most of the inhabitants to migrate to Sitra. Jaw was once spread some distance along the shore, as can be seen from the ruins that surround it, and in addition to having been a pearling centre it was inhabited by the people of Zubara when they wanted to escape the tyrannical rule of the Wahhabis in the 19th century. Jaw is the point on Bahrain nearest to Zubara and the Qatar coast, and for that reason it was always garrisoned when there was a threat to Bahrain from the mainland, but today the Police Camel Corps, which is stationed there, is to prevent the smuggling into Bahrain of Arabs from the Trucial Coast who come seeking work.

North of Jaw on the road to the Refinery is Asker and opposite it the island of Mushaikha, where an old tomb is the centre of pilgrimage for one of the Moslem sects, the Buharas. The interior of the tomb is filled with bottles of rose water, brought by pilgrims as offerings. Asker itself is a village much like Jaw and Dour.

JIDHAFS

We must now return to Manama and follow the other road that leads out of the town, this time in the direction of Budaiya. After passing through some miles of gardens the road reaches Jidhafs, a large village, which is also said to have been at one time the capital of Bahrain. Its inhabitants have a reputation for being enterprising and go-ahead, they have recently demonstrated this by deciding to build a club, the first in any of the villages, although in the towns there are many. Jidhafs contains one of the Shiite Juma Mosques and Friday Prayer is said there. It may seem strange that this should be a claim to fame, but according to Moslem custom only certain mosques are used for the Friday Prayers which is intended to encourage large congregations and to prevent the dispersal of the faithful in all the other mosques.

Like all the villagers, those of Jidhafs enjoy a visit to the town every now and then, and in the evenings bus loads of men and many cyclists can be seen coming in to town to enjoy themselves by going to the cinema or sitting gossiping with their friends in the coffee-shops to the blare of wireless music.

South of Jidhafs in the direction of Suq al-Khamis is the village of Ain al-Dar; although today it presents a quiet and peaceful appearance it was once the headquarters of a notorious gang of robbers who used a ruined house, inhabited by a lunatic, as a cache for storing their loot.

BUDAIYA

This strange town, on the north-western tip of Bahrain Island, is connected with Manama by a good motor road which runs through the village of Jidhafs. Budaiya used to be a large town, divided into Two quarters still spoken of as North and South Budaiya.

ZELLAQ

361 342 South again of Malakiya is Zellaq, the southernmost village on the western Coast of Bahrain and approximately three miles west of Sakhir. A road runs from Zellaq to Awali and is much used by BAPCO employees coming to swim at the former place. The houses of Zellaq village, which are of stone, are built along the shore and many of them are large and spacious. As a result of the activities of BAPCO, Zellaq village has increased in size and prosperity and now contains a number of substantial white stone buildings which are conspicuous from a long distance across the flat and sandy plain that surrounds it.

162 311 The inhabitants of Zellaq are Sunni Arabs; some are from the Dawasir tribe, and many of them are dependents of the Ruling Family. North of the village there are a number of large gardens, irrigated by innumerable artesian wells, which are owned by members of the Ruling Family and by their servants; these gardens form a green belt along the two miles of coast between Zellaq and Sedad.

312 517 The Bahrain Petroleum Company has a pump house at Zellaq which supplies Awali with much of its water and Zellaq was also once the discharging point for tankers bringing crude oil from Saudi Arabia, before the submarine pipe-line was laid. Near the pumping station is the BAPCO Plage, the excellent bathing place which is much used by the employees of BAPCO, particularly in the Summer evenings.

RAS AL-BARR

529 484 481 This, the southernmost point of the Bahrain islands, is a popular place for summer picnics, but the approaches to it are difficult, and although never dangerous they can easily cause trouble to visitors by the softness of the sand. It is best to travel in parties with not less than two cars, so that one can come to the help of the other if necessary, and care should be taken to keep to the tracks, however faintly indicated rather than to carve out new roads in the desert. The road to Ras al-Barr from Zellaq first passes through Mutalla, the Ruler's hunting lodge, while that from Awali past the Jebel passes another hunting lodge at Rumaitha before joining the Western road at Akala. From here the road goes south, past the swamps on the coast and along the narrow strip of sand which marks the end of the island.

136 262 In certain seasons of the year the shores along this part of Bahrain are covered with the eggs of sea-birds, and many Arab dhows anchor off the coast while the crews remove the eggs for food. If one is lucky, while driving down the coast, hare and gazelle may be seen, as well as rose-tinted flamingoes on the shore.

MUHARRAQ ISLAND

MUHARRAQ

491 486 The visitor from Manama approaches Muharraq by crossing the 1½ mile long causeway and Shaikh Hamed Bridge, completed in 1942,

There is a bus service between Hedd and Muharraq and also a few taxi cabs in the town. 414

In addition to the towns of Muharraq and Hedd the island of Muharraq is fringed by many villages ; going north round the coast from Muharraq town they include Busatin, Dair, Raiya, Galali and Arad. The first three villages contain many homes of members of the Ruling Family and are especially popular in the summer when the Muharraq weather is considered superior to that of Manama. Galali is a sizeable village inhabited by fishermen and industrial workers, while Arad is the centre of the agriculture of the island and is built near a large pool in the centre of the date gardens on Arad peninsular. The inhabitants of the village work in the gardens, but on the shores of the Bay near the old Omani fort is a large village built entirely of barastis. In the summer this temporary village is entirely filled with people from Muharraq who spend the nights here, crossing by ferry every day to Muharraq town. 361

In general Muharraq island is very low-lying, so much so that it was thought at one time that there was a danger of the sea affecting the efficiency of the Airport, but this has been removed by pumping stations around the field which remove, when necessary, surplus water from the runways. It was, however, found necessary to build a raised road from Muharraq town to Hedd, for when there was any rain or an exceptionally high tide the road was often blocked. 133 491

UMM ASH-SHAGAR ISLANDS AND UMM ASH-SHIYAIRA

These are the two islands that lie to the south of Hedd town; the former, to the north, is covered with small stone and barasti houses; the second, whose name is a diminutive of the first, contains only barastis and is inhabited by fishermen. 361 101

THE ISLANDS

In addition to these two, there are several other small islands south of Muharraq, of which the three largest, although none of them is more than a few hundred square yards in area, are Halat-as-Suluta, Halat-al-Khulaifat and Abu Mahur.

The first two islands lie to the south of Arad peninsular and at low tide they are joined by a sand-bar which permits walking between them. They contain small villages, whose people derive their livlihood from fishing, and they are lucky enough to have on them fresh water springs. Abu Mahur, the third and largest island, is in fact named after one of the largest of these springs, which is in the sea a short distance from the shore. The fort of Abu Mahur is now in ruins but the island is now used as a quarantine station. 361 226

The fresh water submarine springs south of Muharraq and the manner in which the people obtain water from them has astounded 312

many of the travellers who have visited the islands. Men with deflated sheepskins dive down to the spring and place the mouth of the skin over the place where the fresh water emerges ; the skin then fills with fresh water and when full the diver comes to the surface. Before artesian wells were drilled in Bahrain both Muharraq and Manama obtained much of their water in this way, but today, owing to artesian piped wells and water systems, the undersea springs are little used except those to the north of Bahrain near the pearling banks. A Turkish traveller who visited Bahrain in 1554, Sidi Ali, says of the submarine springs, "The sailors provided with a leather sack, dive down into the sea and bring the fresh water from the bottom for Rais Murad's (the Governor of Bahrain) use. This water is particularly pleasant and cold in spring time. God's Power is boundless !" There is a legend concerning the spring of Abu Mahur which says that in the time of the Caliph Merwan (684-685) a certain Ibn Hakim, a chief in Qatif, wished to marry the lovely daughter of a Bahrain shaikh. His suit was refused and so he attacked the islands and captured all the wells which supplied the towns on Bahrain Island, but the guardian diety of the Bahrainis caused the well Abu Mahur to appear in the sea near Muharraq to succour his people.

NABIH SALIH

A most attractive island is Nabih Salih, set in the Khor-al-Kab between Umm al-Hassan and the mainland of Bahrain. With its thick cultivation, for the date palms run right down to the sea shore, and its many springs, including a large pool much frequented by bathers, Nabih Salih is a very popular place for visitors. In addition to its pool it is a place of pilgrimage for the Shia of Bahrain who go to pay their respects to the tomb of Salih after whom the island is named. The date palms of the island are particularly fine, they compare very favourably with those elsewhere in Bahrain, which is mainly due to the pool already mentioned, Safahiya, which irrigates much of the island. Nabih Salih can be visited by launch or sailing boat, the nearest point to it on Bahrain is Ain al-Hakim ; boats can also be obtained from Umm al-Hasan or from Sitra. People have been known to swim to the island, but this is not the only way of getting there and in the summer this method is inclined to be rather exhausting.

SITRA

South of Nabih Salih and close to the coast of Bahrain is Sitra Island, which in addition to its many villages and gardens contains the Tank Farm and Drum Plant of BAPCO and the land end of the jetty. The site of these installations is a strip of bare and often sea-swept sands, but to the north of the island there are many gardens and a sizeable pool, Ain Raha, which is much visited by the people of Muharraq and Manama. Among the villages of North Sitra are Wadiyan, Sufala, Kharijya and Kuriya. Near the third village is a school and police station. To the south of the island is Umm al-Baidh, literally "Mother

of the Egg," a small village with many seafaring inhabitants. To the north of Sitra there is a very pleasant sandy beach looking towards Umm a-Hasan where there is excellent bathing; the view also includes Nabih Salih and Jaziyra. There is deep water to the north of Sitra, and it is here that the Bahrain Government is building the new Port of Manama with a pier running into deep water from the shore between Umm al-Hasan and Jufair.

JIDDA

This island is about 2½ miles from Budaiya. It is small and rocky and in appearance unlike any of the other Bahrain Islands. Its high cliffs rise abruptly from the water and a few fort-like buildings are silhouetted against the sky-line. On the south side of the island there is a level strip of land which is extensively cultivated. Jidda is Bahrain's penal settlement; here all long term prisoners are detained, spending their time cutting stone, weaving and working in the gardens. There is a small house on the top of the cliffs above the jetty which catches all the wind in the summer and which is used by the Adviser to the Bahrain Government. Being a prison island, Jidda is forbidden to general visitors.

The stone quarries at Jidda are of great age and it is likely that the large stones which line the graves in the burial mounds were cut here. There is an Arabic inscription roughly cut on one of the cliffs which reads as follows :

"During the month of Shaban in the year 968 (April/May, 1561) there was completed the cutting of the 100,000th rock for the mending of the tower of the Bahrain fort in the wazirate of the Great Wazir Jilal ad-Din Murad Mahmud by the hand of the slave . . ." (a few words after this are unreadable).

UMM AN-NASAAN

This, the second largest of the Bahrain islands, lies a few miles across the shallow water to the south of Jidda. It is sandy and flat, with the exception of two small limestone hills towards its centre which break the monotony of its shape. At the north end of the island there are several natural springs and artesian wells from which extensive date gardens are irrigated; they were planted by the late Ruler of Bahrain, H.H. Shaikh Hamed, who also established on the island a herd of black buck and gazelle, the former being imported from India and the latter from the mainland of Bahrain.

There is evidence of ancient habitations on Umm an-Nasan, foundations of many old houses are visible and sherds of pottery can be picked up. Local legend has it that Nasaan, after whom the island is named, was one of the early rulers of Bahrain, but this legend has not been substantiated by historical research.

HOWAR ISLANDS

101 This group of 16 islands is about twelve miles south-east of Ras al-Barr. It consists of one large island, Howar itself, which is about eleven miles long and a mile in breadth, and fifteen other islands much smaller in size. In the centre of the main island there is a rocky [361] eminence known as al-Jebal. There are only two villages, the larger one at the northern end on the shore of the bay consists of stone huts [625] with mat roofs (Kubbar); it also has a small mosque. The Bahrain State Police maintain a garrison on the island, in a fort which dominates [162] the bay and from the roof of which the Qatar peninsular is visible. The islands are inhabited by fishermen from Bahrain and also by men [312] who come to cut gypsum which they sell in Bahrain. The water supply of the island is very limited and consists of old cisterns cut out of living rock which are filled by rain. Attempts to drill for water have failed, but in the years when there is normal or plentiful rainfall the island provides good grazing for camels and sheep. Fishing in the 133 bay is excellent, the water is comparatively deep and a launch can 503 come alongside the short jetty. The southern tip of the island is so close to the Qatar coast that when the tide is out boats cannot pass between the island and the shore, but at one place between Howar and Qatar, a long narrow channel has been hewn out of the coral sea bed to allow boats to pass through a shallow stretch of water. This submarine canal was made by a certain Isa ibn Tarif, a notorious pirate, who played an important part in the history of Bahrain during the middle of the last century; he used the channel as a passage to his fortress on the Qatar coast from where he sallied forth to attack the shipping around Bahrain.

132 The climate of Howar is noticeably better than in Bahrain, it is drier and cooler during the summer nights, but has no other amenities to attract visitors fleeing from the dampness of Bahrain, and at present its only visitors go there for work and not for pleasure.

ZUBARA

361 On the coast of the Qatar peninsular opposite the Bahraini village
172 of Jaw is the ruined town and the bay of Zubara, which has already been mentioned in detail in the history of Bahrain in Part II. The town of Zubara is on the east of the bay and stretches about 1½ miles along the coast and 2 miles inland. The ruins of the town are still impressive. The high wall which surrounds the wide straight streets and the fine mosques, the obvious care with which the town was laid out, speaks well for those who governed it. Further east of the town, at a distance of about two miles across the desert, is the great fort; some of the walls and the mosque are still standing. At the corners of the walls are towers with slits for rifles and the domed roof of the mosque presents an attractive picture. The whole building is made from local stone and little gypsum was used in its construction. Within the fort there are two wells one of which is dry, but the other still

1: Belgrave F-3 (no date) 1953 MZ2 Bahrain MZ2

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A roadside Mosque. Photo : Sir Charles Belgrave.

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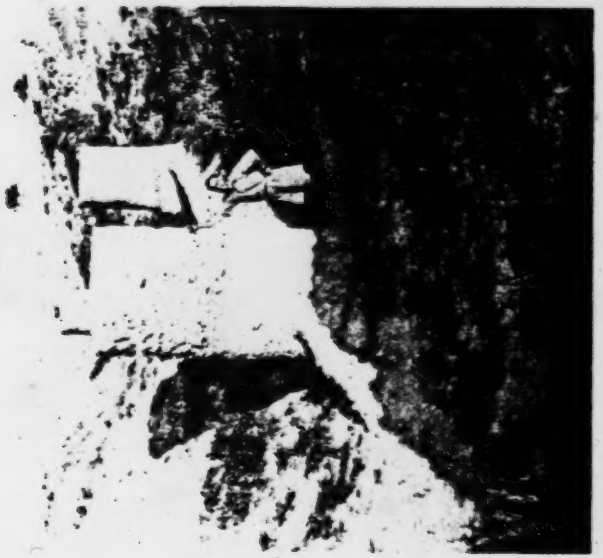

A Qanat (Water Channel) Photo : The Author.

1: Belgrave F-3 (no date) 1953 MZ2 Bahrain MZ2

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The Results of a Fishing Expedition. Photo: Y. A. Shirawi.

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A Village Pool, North Sinra. Photo: The Author.

Rifaa Ash-Sharqi. Photo: The Author.

526

A Bahrain Football Team.

visa either directly to the Bahrain Government or to the nearest British Consulate which will, after reference to the Bahrain Government, accept or reject the application on the latter's behalf. Passengers arriving in Bahrain without visas are likely to find themselves on the next plane outward bound. 486

Travellers from Bahrain who require visas for other countries must apply for them to H.B.M.'s Political Agency. In some cases the Agency is able to issue these visas on behalf of the foreign countries, but in the case of others it will be found necessary to apply for visas directly to the nearest consulate of the country concerned. H.B.M's Political Agency are in a position to inform prospective travellers about the latest regulations on this subject.

TAXES

There is no income tax in Bahrain, but for owners of houses and other premises within the Municipal areas of Manama, Muharraq, Hedd and Rifaa there is a small Municipal tax. 651

WATER AND ELECTRICITY

Within the Municipal area of Manama both water and electricity is provided by the State. 312 377

Within the Municipal area of Muharraq electricity only is provided by the State. 655

Rates for these amenities are as follows :—

Electricity.	*Water.*
First 50 units per month, 4 *annas* per unit.	1,000 gallons *Rs.*1 *As.*14.
Next 200 units per month, 3 *annas* per unit.	Meter rent, 8 annas per month.
Over 250 units per month, 2 *annas* per unit.	Minimum charge, *Rs.*1 *As.*14 per month.
Meter rent 8 *annas* per month.	
Minimum charge *Rs.*1 or 4 units per month.	

CURRENCY

Local currency in use in Bahrain at the time of writing is the Indian Rupee, worth, at the current rate of exchange, 1/6d. 436

Coinage is as follows :—

12 pice make 1 anna.
4 pies make 1 anna.
16 annas make 1 rupee.

The following coins and notes are in circulation :—

1 pice (1/12 anna)	copper	1 rupee	nickel and note
1 pie (¼ anna)	copper	2 rupees	note
1 anna	nickel and brass	5 rupees	note
2 annas	nickel and brass	10 rupees	note
4 annas	nickel	100 rupees	note
8 annas	nickel		

4: Bahrain G-5 (no date) 1953 MZ2 Bahrain MZ2

MAIN WATER SUPPLY

OPERATING ACCOUNT

S. 1370

Expenditure	Rs.	Rs.	Revenue	Rs.
To Establishment Costs	31,496 4 7		By Sales of Water and Rental of Metres	2,03,761 3 0
To Electric Power at Pump House	15,622 0 0		By Miscellaneous Receipts	5,460 0 0
To Upkeep and Repairs to Mains	22,745 0 0	69,863 4 7		
To Reserves for Bad Debts	2,105 0 0			
To Depreciation on Capital fixtures	1,13,630 0 0	1,15,735 0 0		
Balance being Profit carried to Profit and Loss Account		23,622 14 5		
	Rs.	2,09,221 3 0	Rs.	2,09,221 3 0

PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
To loss at end of 1369	1,45,788 14 2	By Profit for 1370 brought forward	23,622 14 5
		By Loss carried forward to 1371 account	1,22,165 15 9
Rs.	1,45,788 14 2	Rs.	1,45,788 14 2

YEAR 1371

OPERATING ACCOUNT

Expenditure	Rs.	Revenue	Rs.
To Establishment Costs	51,415 12 4	By Sales of Water and Rental of Meters	2,50,422 0 0
To Electric Power at Pump House	17,435 14 0	By Miscellaneous Receipts	3,780 12 0
To Upkeep and Repairs of Mains	13,585 0 0		
To Depreciation	1,29,284 0 0		
	2,11,720 10 4		
Balance being profit carried to Profit and Loss Account	42,482 1 8		
Rs.	2,54,202 12 0	Rs.	2,54,202 12 0

PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
To Loss at end of 1370	1,22,165 15 9	By profit for 1371 account	42,482 11 8
		By Loss carried forward to 1372 A/c	79,683 14 1
Rs.	1,22,165 15 9	Rs.	1,22,165 15 9

YEAR 1372

OPERATING ACCOUNT

Expenditure	Rs.	Revenue	Rs.
To Establishment Costs	59,876 6 0	By Sales of Water and Rental of Meters	2,71,411 1 0
To Electric Power at Pump House	15,500 10 0	By Miscellaneous Receipts	6,322 12 0
To Upkeep and Repairs of Mains	15,224 11 3		
To Depreciation (see note below)	1,67,583 0 0		
	2,58,184 11 3		
Balance being Profit carried to Profit and Loss Account	19,549 11 9		
Rs.	2,77,734 7 0	Rs.	2,77,734 7 0

PROFIT AND LOSS ACCOUNT

	Rs.		Rs.
To Loss at end of 1371	79,683 14 1	By Profit for 1372 account	19,549 11 9
		By Loss carried forward to 1373 A/c	60,134 2 4
Rs.	79,683 14 1	Rs.	79,683 14 1

NOTE : The rate of depreciation on Water Meters has been doubled this year ; and an extra sum of Rs. 25,000 charged against expenditure, to cover the increase.

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653 491

In the last ten years several new roads have been made by the Government, linking up existing roads, such as the road from Sehlah to a point on the Budeya road opposite the Portuguese Fort and the road from the top of Rafaa hill to East Rafaa, which used to be inaccessible except from down in the valley.

There is still need for several more roads, especially for one connecting Aali with Manamah, which will take the donkey traffic which comes into Manamah from the villages around Aali. The main road to Radm al Koweri cannot be widened any more, except at great expense, as it is bordered on both sides by valuable date gardens, and the mixture of motor traffic and laden donkeys, which disregard all traffic rules, is a constant source of accidents. The country people themselves, through the Shia Wakf committee, have asked that a donkey track should be made so that they need not use the motor road.

653 491 346

Buildings. Suk al Khamis Mosque.

In 1346 (1927-28) the ancient mosque at Suk al Khamis, which was in a dangerously dilapidated condition, was restored by the Government, which at the same time straightened out the main road which previously made a wide detour. Earlier attempts to bring the road past the mosque had been opposed by the Shia villagers, but because they were pleased at the Government's action in repairing the mosque, no objections were made about the road.

This mosque was described by Von Ernst Diez, who visited it in 1914, as being a mosque of the year 740 H. (1339-40). The ornamentation of the wooden pillars and cross beams are of particular importance and interest. Over twenty years ago all the wood in the mosque disappeared. During the last few months I have found, and been able to recover from a neighbouring village, several of the beams and large pieces of wood containing the carvings which were described and illustrated by Diez and which he ascribed to the ninth or tenth century.

653 312

Idari Water Channel and Mosque.

During this and the following year the Government, at the request of the landowners whose property is irrigated from Idari spring, built a cement water channel from the main spring to the high road, a distance of about 1,200 yards. The cost of the work, Rs 21,000/-, was paid by the owners of the gardens. At the same time the Government built a small mosque, on the site of an older one, on the bank of the pool. During the last year, further improvements have been made at Idari, and a quantity of flowering trees and bushes have been planted there. The pool during the summer is visited by thousands of people, who bathe there.

653 346

Manamah School and Workshop.

The school was begun in 1347 (1928-29) and completed in the following year. The cost of the Manamah School, and a small school which was built at the same time at Suk al Khamis, was Rs 39,000/-. There are ten class-rooms in Manamah, capable of accommodating about three hundred boys, and a large hall which has on one occasion held six hundred people. The building is of stone and cement and is on one floor.

During the present year a workshop has been built close to the school on the opposite side of the road. This became necessary as the carpentry and engineering classes made so much noise when working in the main building that other classes were disturbed.

653

Barracks, Police Station.

In 1353 (1934-35) a new barrack room was built in the Fort in place of some of the old rooms, which became uninhabitable. The original building was made of stones fastened together with mud, plaster, and covered with a thin coating of lime plaster. Every year for the last ten years portions of the main wall of the Fort have fallen down, and most of the old quarters inside the Fort are in a dangerous condition.

A second barrack room was built in 1936, and also a new armoury and three motor garages, and in 1937 the north-west tower, which had fallen in, was rebuilt and part of the walls were faced with cement and thoroughly repaired.

The larger of the two barrack rooms, which is 114 feet long and 22 feet wide, with three doors and fifteen windows, and also clere windows, accommodates forty men and cost Rs 7,300/-

5: Bahrain G-5 (1926-1937) 1937 MZ2 Bahrain MZ2

632 Until 1348 the Government paid Rs 48,000/- per annum to municipal funds, and the municipality paid Rs 24,000/- to the Government towards public protection.

632 491

Municipal Achievement.

Manamah. It is in Manamah that the work of the municipality is most conspicuous, partly because Manamah Municipality has had more money to spend and has existed for longer than the Muharraq Municipality.

Roads.

The most noticeable work in Manamah during the last ten years is the construction of roads and the widening of streets in the bazaar area. Ten years ago there were very few parts of the bazaar which could be reached in a car, and even the most important shops were situated in narrow lanes. Now most of the principal bazaars are accessible to cars. The wider streets, which are in some places permanently roofed, are more healthy and sanitary and are easier to keep clean. The style of building has changed: people are no longer contented with low, dark shops, but build high, airy showrooms with windows in which their goods can be displayed. Although the first people to set this fashion were foreign shop-keepers, their example was very soon followed by the local traders, especially as, during the last two years, rents of good shops and offices, as well as houses, have risen considerably.

632 744 ● 382

Conservancy, Sanitation, Water Supply, Malaria.

For many years a municipal contractor was employed to clean the town; his work was satisfactory in the conspicuous parts of the bazaar and town, but not satisfactory in the back quarters of Manamah. The municipality now does the work itself, with more successful results. On the whole, the town is very clean and free from smells. One of the greatest problems which the municipality has to deal with is the reclamation of low ground behind the town, where water lies stagnant after the rainy season for many months. Originally the people of Manamah dug mud from this site for building houses, and now a large area of ground is only a few feet above sea level, so low that all attempts to drain the water into the sea have proved unsuccessful. During the last two years, special grants of Rs 10,000/- have been made by the Government to the municipality for filling this ground. The work is not yet complete.

Until a few years ago sanitation in Manamah consisted of cesspits in every house, which were emptied once or twice a year. The system was satisfactory; the municipal inspectors reported any leaking drains or insufficiently covered cesspits. Lately, however, many householders have installed a water supply, and an attempt at modern sanitation. In the case of houses on reclaimed land and near the sea, the drains flow into the sea, but the drainage conditions of houses distant from the sea is not satisfactory. A sewer which was built from the Municipal Garden to the sea, at the cost of over Rs 7,000/-, has not proved a success owing to the small difference in level between the garden and the sea, and drains which empty into this sewer have flowed backwards. At the time of writing, work is being done on the sewer, and it is hoped that it will eventually serve its intended purpose.

The water supply in Manamah now consists of a number of artesian wells, some of which are private property, others having been made by the Government. The Government and the municipality have issued regulations to prevent waste of water and the collection of stagnant water where mosquitoes will breed; these regulations are effective in the town. During certain months of the year, in the spring and autumn, there are a great many mosquitoes in Manamah and Muharraq. It has, I think, been proved that the main mosquito-breeding place is inside houses in the large earthenware water jars which are kept in every compound, usually in a dark corner under a shed. They are never emptied, but are refilled when the supply gets low. Until now the municipal council and the public have strongly opposed all suggestions that the water jars should be inspected. In Rafaa and Sakhir there are always quantities of mosquitoes, and these places are many miles from any gardens or water, which is an additional proof that the mosquitoes breed inside the houses. The municipalities spray oil on all standing water and take all possible steps to deal with breeding places which are not inside houses, but their officials have no authority to enter houses and inspect them.

At a future time it will be necessary to consider installing a regular town water supply, and possibly a drainage system as well. It is possible that a water system with a tap in every house would obviate the need of water jars and reduce the number of mosquitoes.

● 312

Above
An Artesian Well
(Showing head of water)

Below
A Natural Spa (Adari)

[facing p 414]

5: Bahrain G-5 (1926-1937) 1937 MZ2 Bahrain MZ2

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The municipalities are valuable vehicles for carrying out sanitary and health measures among the public. It is easier to introduce unpopular rules, such as anti-malaria regulations, through the municipalities than by direct Government action.

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Fire Precautions, etc. In several parts of the town there are quantities of barasti houses made of palm branches; these buildings are very inflammable. When fires occur in these neighbourhoods the flames spread rapidly. The Manamah Municipality some years ago built fire stations in various parts of the town, equipped with a fire bell and tins of sand for use in emergency. The storing of more than a certain number of tins of petrol and paraffin inside the town was also forbidden, and for this reason the Anglo-Persian Oil Company were given a piece of ground on the sea shore beyond Manamah, on which they built an oil and petrol store. The Government has now ordered a fire engine from England, and when this arrives, valves will be fitted on to the artesian wells in the town so that the engine can fill from any well. The fire engine will be in charge of the police, and will be kept at the Fort.

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Markets and Food Regulations. During the last ten years the municipality has greatly improved the conditions under which food is sold in the bazaars. Animals used to be slaughtered in the town opposite the Municipal Building, and the meat was sold under filthy conditions in a line of palm branch shops whose mud floors were never clean. The monopoly for the meat market and the slaughter-house was in the hands of Shaikh Sulman bin Shaikh Hamad. The municipality, in 1346, built a slaughter-house on the shore at Kozaibia, actually in the sea, connected to the shore by a pier, and by means of an arrangement with Shaikh Sulman a proper stone meat market was built adjoining the Municipal Building. The municipality eventually, with the assistance of the Government, purchased Shaikh Sulman's rights over the slaughter-house, which is now a municipal concern. The negotiations, unfortunately, caused considerable ill-feeling, but the final results were satisfactory.

In 1931 a fish market was built, and during the present year three large steel markets have been erected by His Highness on his own property in the Suk al Arba, which are to be used as vegetable, lucerne, and fruit markets. These buildings, and a number of new stone shops, occupy a site which previously contained barasti buildings. After a serious fire at the end of 1936, the whole of the area was laid bare, and it was then possible to rebuild the markets, replacing straw shelters with stone shops and steel buildings.

Many regulations have been passed by the municipality affecting foodstuffs; dried fish, which has an evil smell, can only be sold in a certain area; the food sold in the hotels and coffee shops is regularly examined by municipal inspectors, who are also responsible for the cleanliness of soda factories. Other matters affecting food in which the municipality has shown an interest—sometimes a rather officious interest—are prevention of short-weight bread, use of soda, adulteration of real ghee with cheap vegetable ghee, short-weight rice, and also standardisation of weights and measures. During Ramadhan, the municipality buys a quantity of sheep and sells meat at cost price in order to assist the poor. Other charitable work which is done by the municipality is the payment of compensation to poor persons whose houses are destroyed in fires, and the burial of paupers.

Public Health Measures. In 1931 the municipality opened a lunatic asylum, which was badly needed. It is under the supervision of the Quarantine Medical Officer. The inmates are men and women, and it usually contains about a dozen patients.

The need for a leper settlement has been often discussed by the council, but this has been postponed until the Government has its own medical officer. There are a number of lepers in Bahrain, especially in the country villages, and undoubtedly steps should be taken to segregate them. Foreign lepers, when they are discovered, are immediately sent home to their own countries.

Attempts to enforce compulsory vaccination have not yet succeeded, though the need for this is appreciated by many members of the council.

Both in Manamah and Muharraq there are municipal midwives—Indian—who also have free dispensaries and clinics for women and children. The Government has recently opened a second

6:Faroughy H-5 (no date)1951 MZ2 Bahrain MZ2

INTRODUCTION

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131 About midway of the Persian Gulf and some fifteen miles off the coast of Arabia, lie the Bahrein Islands at the mouth of the Gulf of Bahrein, of which the Qatar Peninsula forms the western side. There are five principal islands, only two of which are of real consequence. The largest and by far the most important is variously called Awal, Al Manāmah after the principal city, or more commonly just Bahrein. The last is the modern designation.

103 In ancient times, the name "Bahrein" was applied to a larger area which included the Arabian mainland of Qatar and Hajar and the land situated between Mesopotamia and the Gulf of Oman (the Indian Ocean); this area took in the entire southern coast of the Persian Gulf. This has caused widespread misinterpretation of much of the writings of pre-Islamic and Medieval historians. Throughout this book we shall use the term "Bahrein" in its modern sense to refer to the archipelago of Bahrein proper or to the central island, except where the mainland province is clearly indicated.

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511 Bahrein today has few attractions. There is not much to recommend it as a place of residence, as it is intensely hot for about seven months of the year, and for many of the native inhabitants lacking in comfortable living conditions. For tourists it is rather off the beaten track. Nevertheless, through the centuries these bits of land have been considered well worth fighting for by both European and Asiatic empires.

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312 The reason for Bahrein's unusual and enduring importance can be summed up in two words—pearls and strategy. The pearl fisheries of Bahrein have been known all over the world since the dawn of history and, thanks to an abundance of fresh water springs, the island was a frequent stopping place for ships on the trade routes to India and the Far East.

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175 The Portuguese, the first European power to have an Asiatic colonial empire, fought hard for possession of the islands.

6:Faroughy H-5 (no date)1951 MZ2 Bahrain MZ2

131 Arabia and somewhat closer to the Qatar Peninsula. Manama, the capital, is at 26°13′ north and 50°35′ east.[1]

The archipelago is formed by five principal islands and a number of smaller ones, of which only one is of real importance. It is variously called Awal,[2] Manama after the principal city, or more commonly just Bahrein. Curiously shaped in the semblance of a sea horse,[3] the island is only twenty miles long and ten miles across at the widest point.

312 Bahrein would be totally uninhabitable if it were not for an abundance of fresh water (believed to come through channels under the sea bottom from somewhere in Arabia, probably the Tuwaik mountains) which supplies about two hundred springs and many artesian wells. It is likely that some of these springs were formerly under the sea, since the islands are surrounded by coral formations and in such places the sea always tends to become shallower and dry land to increase. In the northern part of the principal island the water is plentiful enough to produce luxuriant gardens and palm groves, and on the other islands irrigation farming is carried on extensively.

Fresh water springs are also found on the shallow ocean bottom. In former times the natives dived into the sea to collect drinking water in collapsed goatskins. Some water sellers used more scientific methods, however, sinking bamboo tubes to the level of the springs, then collecting the water as it rose above sea level.

GEOLOGY

133 Bahrein lies on a portion of the ancient Tethys geosynclinal belt represented today by the Persian Gulf. The formation of the principal island is the result of pressure from the mountainous masses of Persia against the crystalline platform of central Asia, the thrust being absorbed by a gentle folding in the

1. The British Political Agency is at lat. 26°14′09.95″ N. and long. 50°35′00.39″ E.
2. The etymology of the word *Awal* is "fish" or "whale."
3. See map, back of book.

geosyncline. The structure of Bahrein is that of a large, single, closed dome covering the entire faulting. 133

Rocks exposed at the surface consist of:

1. Recent sands and coquinas forming flat, raised beaches surrounding the island from which the surface rises gradually to an elevation 150 to 200 feet above sea level. At this point it breaks away into inward-facing cliffs eighty to one hundred feet high completely surrounding an oval central depression about twelve miles long and four wide.
2. Pleistocene sands, cross bedded and probably wind deposited, lying in the canyons.
3. Meiocene silicious clay covering a very limited area.
4. Eocene limestone covering most of the island, the central region of which, known as "Jabal Dukhān" or "Mountain of Smoke," rises to a point 439 feet above sea level. The limestone is very porous and is the source of most of the water in the northern half of the island. [312]

Because of the coral formations surrounding the islands, the sea approach is shallow, so that only vessels of very light draft can land. Ships drawing as much as twenty feet anchor from two to four miles out in the Gulf, and those of greater draft from fourteen to seventeen miles out. Shallow boats are used for all transfers of passengers or freight, and the Standard Oil Company was obliged to construct a submarine pipeline three miles long to convey oil from Bahrein Island to its tankers. 133 503

CLIMATE

The Bahrein Islands possess one of the most trying climates in the world. It is intensely hot for about seven months of the year and the humidity stays near the saturation point. The annual average temperature is 78° F. with a corresponding relative humidity of 73%. The hottest month is August, when the mean temperature is 92° and between noon and 3 P.M. may 132

6:Faroughy H-5 (no date)1951 MZ2 Bahrain MZ2

Manama, is the capital of the State, and is the official residence of the Sheik. The Sheik holds court and administers justice once a week on the balcony of the municipal building and petty criminals are publicly flogged by red-turbaned policemen in the market place immediately below.

Manama is also the seat of the higher court composed of two members of the family of the Sheik and presided over by the British Adviser. The British Political Agent, who is under the authority of the Persian Gulf Political Agent at Bushir (in Persia), also has his residence in Manama.

BADAIYA'A is located at the northwestern end of the island, a mile from the coast. The majority of its eight thousand inhabitants belong to the Dawāsīr tribes, famous for their ability as divers. Following the political upheaval of 1923,[1] the Dawāsīr evacuated the town and fled to Damān on the mainland, but the majority later returned.

Near Badaiya'a are the two important centers of *Diraz* and *Jamra.*

ZALLĀQ. Situated on the west coast, this is another important center inhabited by the Dawāsīr fishermen and divers.

BALAD AL-KADIM. Really a cluster of several villages, this is, after Manama, the most active native center, with many palm groves and artesian wells. Its small but important population consists mostly of Baharinah farmers and fishermen. A short distance from the village is the small Sūq al Kaamīs where the Thursday market is held. Half a mile farther on is the famed water source of Abu Zidān with a religious school near by and a noted minaret in the Persian style, reminder of Iranian supremacy.

BURI, another village inhabited entirely by the Baharinah, is located about seven miles south of Manama. It is a date producing center with ten to twelve thousand palm trees.

JIDD HAFS is located about three miles west of Manama on the highway joining that town to Badaiy'a. Populated by the Baharinah, it is one of the most prosperous agricultural centers,

1. See below, p. 99.

361 with palm groves containing more than sixteen thousand trees,
162 as well as numerous vegetable gardens and orchards.

Near by is the small village of 'AIN-AD-DAR.

'ALI is located about a mile north of Buri to the west of
[491] the paved main highway running south from Manama to the Jabal Dukhān region. A motor road joins the village to Buri and Karzakkan and the west coast of the island. Situated as it is in the midst of palm groves and vegetable gardens, 'Ali is an important market place. Many of the Persian residents of the island own lovely homes there and the town has a mosque in the Persian style.

SANĀBIS and FALA, on the north shore of the island about three miles west of Manama, are active commercial and fishing centers inhabited by the Baharinah.

RIFA'. The two villages of East Rifa' (Ash-Sharki) and West Rifa' (Al-Gharbi), situated a mile apart, are near the center of the island. Since their location is considered to be one of the most healthful in Bahrein they are not surprisingly inhabited by the Utūb, the tribe to which the Sheik belongs. His immediate
• [312] family lives in West Rifa', which is more exclusive though the important water sources are at East Rifa'.

ASKAR. This is another village of interest on the east coast, four and a half miles east of Jabal Dukhān. The inhabitants are the bu 'Ainin, probably the descendants of the people who ruled Bahrein nearly a thousand years ago.

About three miles away is the town of JAU, also on the east coast. Near by are historic ruins, probably the remains of the important ancient town, also called Jau, which is believed to have been the capital of the island in pre-Islamic times.

KIRABAD, or "Oil City," is the initial Awali camp built by the Bahrein Petroleum Company for the use of its employees and popularly known as "Bapco" from the initials of the company. Three miles away is the refinery. The town is on an elevation eighteen miles south of Manama, to which it is connected
[491] by a modern highway also built by the company.

000 "Bapco" has some two hundred homes for married members

longest runway, to the nearest hundred feet, is 7400 feet long. There are radio communication and direction finder with voice, and the Radio Bahrein tower operates on 6440 kilocycles, 117.9 mc.

The other principal islands of the Bahrein group are:

SITRA, which is separated from Bahrein by the Sitra Canal, which is about a quarter of a mile wide. The southern part of the island is completely barren but in the north there are small villages, mostly inhabited by Baharinah farmers and fishermen. The most important are Wadiyan, Kharijia, Muhazza and Sufala, all of which are important date growing centers.

NABBI SĀLIH, the smallest of the five islands, situated about three quarters of a mile off the coast of Bahrein. There are palm groves and two small fishing centers, Kaflan and Karya. The island has many gardens and orchards as well as palm groves with some fifteen thousand trees. It is entirely inhabited by the Baharinah.

UMM NA'SAN, two miles west of Bahrein, a low and sandy island four miles long and triangular in shape. The island is dominated by two rocky peaks, one rising to an elevation of sixty-six feet at about half a mile from the western point of the island, and the other twenty-five feet high situated about half a mile farther to the east. Near the west coast there is a water source used by the people of the west coast of Bahrein, mostly the towns of Badaiya'a and Zallāq, whose custom it is to send their cattle to graze there during the summer.

Besides these principal islands there are a number of smaller ones, mostly inhabited. From north to south and west to east these are:

KHASAIFA.

JARDI.

SAYA, with its fresh water spring, located about half a mile off the west coast of Muharraq Island.

ABU MAHIR, a small island south of Muharraq and connected to it at low tide. There is a small fort on the island erected for the defense of the water source which formerly supplied the people of Muharraq.

formerly supplied the people of Muharraq. The inhabitants, who are divers and fishermen, belong to the Sunnite sect.

NAIM, SULUTA, and KHULAFFAT are three small islands in the Gulf of Arad.

Farther east are:

[312] ABU SHĀHIN, with its fresh water spring.

UMM SHAJAR.

UMM SHIYARA.

Mention should also be made of the three small, rocky islands north of Sitra bearing the name of Kasr (Castle) and farther south, opposite the village of Askar, the little island of Mashāikh with its fishing huts.

Off the east coast there are many others which are rocky islands or mere shoals and of no interest to us. Among them are the small islands of Raka and Cliff, El Ben farther north, and Yusuf closer to the coast.

ANTIQUITIES

The north central part of Bahrein Island is covered with thousands of large tombs in the form of mounds of rock heaped with earth which are among the unsolved mysteries of Near Eastern archaeology. Their number has been variously estimated at from fifteen thousand to several hundred thousand—so many in fact as to be completely out of proportion to the size of the island and its possible ability to support in ancient times a population to match the size of this enormous cemetery.

The tombs are ancient burial vaults of large dressed stones erected at ground level, sometimes with a second story. After the interment the vault was covered with a mound of gravel, stone chips, and earth, obtained largely at the foot of the cliffs surrounding the central basin of the island. The mounds vary greatly in size, ranging from four to eighty feet high and up to one hundred feet in diameter. Some of the largest tombs show the remains of outer walls, while others seem to have been surrounded by rings of heaped up gravel to keep intruders

organize the secondary school system. The teachers received from £25 to £30 a month and "bed and board" paid by the Bahrein government. Interestingly enough, the first director of the first school opened at Muharraq was the present Saudi Arabian Minister to London, Sheik Hafiz Wahba.

At present, there is no newspaper in Bahrein. A weekly newspaper, Al Bahrein, was founded in 1939, but ceased its publication after the death of its publisher, Abdallah Za-id. In 1940 a broadcasting station was built, and the Al-Bahrein Radio started short-wave broadcasts on a 23-m, 50 band on November 4. During the war, Radio Bahrein was most useful to the Allied cause, since its four daily news broadcasts in Arabic and Persian were heard more easily throughout the Near East than those of Egypt.

Besides the schools, two "circles" for the discussion of political and literary matters were established in 1935 under the patronage of the brother of the Sheik. There was already a Cercle Israelite in the island.

ECONOMY

The geographical features and the geological formation of the islands greatly reduce the economic value of Bahrein. The scarcity of water and the sandy nature of the soil exclude agricultural development. The application of modern methods of agriculture and the utilization of artesian wells and gasoline operated pumps are too recent and too inadequate to make Bahrein even partially independent of imported food. For many years to come, and probably forever, the islands will be dependent on food, meat, vegetables, and fruits brought chiefly from the Persian or Arabian mainland.

Fortunately, in most of the islands of the Persian Gulf and the surrounding regions, wherever water is found naturally or captured artificially, date palms grow with astonishing ease. The northern part of Bahrein Island, thanks to natural springs and more recently to artesian wells, is practically a string of oases with palm groves numbering several hundred thousands.

3:Royal Institute of International Affairs U-4 (no date)1954 M1 Middle East
Bahrain M22
Kuwait M11
Saudi Arabia MJ1

companies may need to be defined now that one concessionaire seems likely to create revenue; problems may also arise if, as a result of oil developments, it is planted with a population that will need to be endowed with public services and, no doubt, with a system of taxation.

BAHRAIN

The Bahrain Archipelago is a group of islands in the Gulf of Bahrain, which is bounded on the east by the Qatar Peninsula and on the west by the mainland coast of al-Hasa. Its total area is 213 square miles. The principal island—Bahrain itself—is about thirty miles long and ten miles wide. It is low-lying and its northern end is well watered by fresh water springs and produces good date crops. Citrus fruit and lucerne are also grown. The oilfields lie round the rocky cluster of hills known as Jebel Dukhan (Hill of Smoke), which is in the barren centre of the island.

To the north-east of Bahrain Island, and joined to it by a causeway and motor road, is the low, sandy island of Muharraq, and between the two islands is a good deep-water harbour (Khor Kaliya). It is used as a small British naval base; an American admiral also flies his flag there. Nearby there is a second, but shallow harbour (Bahrain harbour), which faces north and is usefully equipped. The natural aerodrome on Muharraq Island has been developed into the largest commercial airfield in the Persian Gulf and now serves the airliners of all nations. It is also used by the RAF, and the whine of jet aircraft is a commonplace. The south end of the island of Bahrain is low-lying and sandy. The climate, though oppressive in summer owing to the prevalent heat and damp of the western shores of the Persian Gulf, is more humid and less windy than that of Kuwait. The population of the Archipelago was 109,650 when a census was taken in 1950.[1]

The capital and the seat of government is the port of Manama.[2] It is generally referred to as Bahrain, and is situated between the two harbours. It has a population of 39,648, which includes many rich Arab, Persian, and Indian merchants, as well as some 300 Europeans and Americans. The second town, Muharraq, on Muharraq Island, has a population of 24,566 which is purely Arab.

The British Political Agency is in Manama town, which also boasts an electricity station, a wireless station, post offices, hospitals, clubs, public gardens, and up-to-date schools. The town is well supplied with good motor roads, and there are

[1] 1952 estimate, 115,000. [2] Population: 1950, 39,648; 1952 (estimate), 45,000.

THE COMPANY ALSO

refinery on the eastern side of the island, opposite Sitra. It was expanded in 1945, and 80 to 85 per cent of the crude oil processed is now obtained by pipeline from Saudi Arabia. The refined petroleum products are pumped to storage tanks on Sitra Island, and subsequently to a deep-water loading terminal 3 miles offshore. Over 6,000 Bahrainis, as well as some 1,600 British and Americans, are employed in different branches of the industry. Two thirds of the royalties accrue to the Bahrain government, half of which are utilized for capital expenditures designed to raise the standards of living of the people. Reports for 1951 indicate that 68 per cent of the government income was derived from oil revenues, as against 26 per cent from customs receipts.

The renewed prosperity of the islands and the concurrent growth in population have stimulated private enterprise and the growth of small factories to supply current needs, particularly as regards building materials. Fishing is an important seasonal occupation of many villagers, and preserved fish, fish oils and other fish products are items of export. Agriculture plays a minor role. Barely 5 to 10 per cent of the total land area is under cultivation, and further expansion is restricted by the nature of the terrain, the concentration of water supply in limited areas and a feudalistic system of land tenure. Date gardens flourish in oases on Bahrain, Muharraq and Sitra Islands, but the supply equals less than one quarter of the local requirements. The government is endeavoring to promote the introduction of other crops, and maintains an experiment station at Budaiya.

The sea approaches to the archipelago are shallow, making it necessary for ocean vessels and oil tankers to anchor 2 to 4 miles from the shore. Bahrain and Muharraq, however, have good harbors which accommodate dhows and other shallow-draft vessels. Manama is an active trading center: coastal traffic is more or less continuous, while frequent steamer services are available to the northern Gulf ports and to India AND PAKISTAN.

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342 flat roofs, surrounded by parapets. Those with two or more stories sometimes have broad balconies.

342 571 In the towns, the poorer people often occupy multifamily houses in the older, congested districts or live in hut settlements on the outskirts. The huts, known locally as *barastis*, are made of bamboo or date-stick poles interwoven with palm leaves, and roofed with palm-leaf matting. They are frequently grouped within pole and matting stockades, the individual huts being separated by narrow alleys. Of the 5,703 houses 342 511 counted in the town of Manama at the time of the 1950 census, 2,608 were of palm-leaf 361 construction. Although the standards of living have improved among the laboring classes within recent years, most of the rural inhabitants dwell under primitive conditions, as did their forefathers. Palm-leaf huts predominate in the date garden and the fishing villages. They are admirably adapted to the heat of summer, but afford poor protection against the occasional cold winds.

186 361 663 342 The rural Baharna and Arabs live apart in segregated villages, and even in the towns there is a tendency for the different racial and religious groups to form distinct communities. The Bahrain Petroleum Company has created a self-sufficient modern settlement for its British and American employees at Awali, on the edge of the oil field area. The development of modern housing projects is also being promoted by the government, and plans are under consideration for the demolition of certain slum areas and the erection of low-rental dwellings.

ENVIRONMENT AND SANITATION

Water Supplies

312 The fame of the sweet-water springs of Bahrain stems from ancient times, and undoubtedly contributed to the early development of Manama as a trading center. Not only do abundant sources of water exist in the oases along the northern end of Bahrain

Island, but fresh-water springs, said to originate in the mountains of Arabia, are found in the shallow waters about a mile from the shore. Up to around 25 years ago, most of the water used in the towns was brought by donkey carts from wells or springs in the oases; sometimes by boats from the offshore springs. Water for domestic and irrigation purposes is now obtained from springs and shallow wells, and to an increasing extent from deep wells: several hundred artesian wells have been sunk within recent years on Bahrain, Muharraq, Sitra and other islands. In 1948, a special Agriculture and Water Committee was created in the government to control the water supply and prevent unnecessary wastage.

Manama has a municipal water supply, the initial stages of which were completed in 1948. Water, derived from artesian wells, is piped to about 70 per cent of the houses and to community fountains in the older, congested districts and *barasti* settlements. In other towns, water from private wells is used, or day-by-day supplies are purchased in 5-gallon cans from commercial peddlers.

Most shallow wells and spring supplies are unprotected and seriously polluted. Since the installation of a piped water system in Manama, many of the shallow wells have been closed, with a resultant decrease in anopheline breeding and in prevalence of intestinal infections. However, numerous opportunities for contamination still occur in the distribution of water from community sources. Distilled sea water is produced by a plant at Manama, but its sale for household purposes has been restricted since the town supply became available.

Waste Disposal

The methods of sewage disposal are generally primitive. Septic tanks are employed in connection with many of the newer houses, and in the oil company installations. Cesspits or simple privies are in use in the bazaar districts and the *barasti* quarters, as well as in the smaller towns and villages.

63:Simmons et al G-5 (1941-1951) 1954
M1 Middle East
BAHRAIN MZ 2

Responsibility for the protection of the health of the people resides in the Public Health Department of the Bahrain government. It has curative and preventive divisions, and is administered by a Chief Medical Officer with headquarters in Manama. Four general hospitals—government, mission and industrial—with an aggregate capacity of 324 beds were functioning in 1951. In addition, the government services operated 5 special hospitals with 86 beds, maternity clinics and scattered dispensaries for men and women. Water supplies are obtained from large numbers of artesian wells, as well as from springs and shallow wells. The town of Manama has a piped artesian supply which serves over 70 per cent of the houses. Sewage is disposed of by primitive methods, and most well and spring water sources are polluted.

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30: Gt. Britain G-5 (ca. 1918) 1920 MJ1 Saudi Arabia
BAHRAIN MZ2

133 el-Kabb, runs into the island from the E. coast, penetrating nearly to the centre. The rocks of Bahrein, except those of Jebel ed-Dukhān, which are dark, are pale-coloured limestone of the Eocene Age, sometimes sandy or argillaceous, and containing much flint or other siliceous material, with both gypsum and salt. The interior depression, like the flat shores of the island, has emerged from the sea in more recent times; the latter consists of coral rocks or shelly concrete. There is a small deposit of asphalt 3 miles SSE. of Jebel ed-Dukhān. 312 The Bahrein islands are famous, like the oases of Hasa and Qatīf, for a number of springs, clear but slightly brackish, which are fed by the drainage from Nejd travelling down to the coast under the Dahanah desert. Some of the springs are submarine (*kaukab*); the best known of these are that called *Abu Māhur*, close to Muharraq Island, and that near the E. extremity of *Khōr Fasht*, a large coral reef about 7 miles NW. of Bahrein Island. The best water of the archipelago comes from the *Haneini* wells N. of the central depression on Bahrein, and the *Khālid* and *Umm Ghuweifah* wells on the adjoining plateau. The springs N. of the Khōr el-Kabb are generally almost pure, but warm, as in Hasa: the best known are called *'Adāri*, *Qassāri*, and *Abu Zeidān*.

Climate

132 Through the nearness of the sea on all sides, and abundant irrigation, the atmosphere of Bahrein is damp and heavy, with a mean humidity ranging from 79–80 per cent. of saturation. Though [164] there is much malaria and rheumatic disease, the climate is not the most unhealthy in the Gulf. The maximum temperature, usually attained in August, is about 104° F.; the minimum, reached in December or January, about 48°. The average rainfall for the years 1910–13 was 4·55 in. The weather from October to April inclusive is not unpleasant, indoor temperature ranging between 60° and 85°. In January and February N. winds blow, and it is cold enough for fires to be acceptable. Though the weather is hot from the beginning of May to the middle of June, the heat is still tempered by the sea-breeze, and nights are fairly cool. The oppressively hot weather lasts from the middle of June to the end of September; in this period, though there may be irregular land-breezes, the thermometer remains persistently above 100° F. All rains fall between the middle of October and the middle of May, but actual wet days are few. The prevailing wind is the *Shamāl* or north-wester, which blows for forty days from the second week in June and is very violent in winter; next to this in frequency